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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/884,313	06/19/2001	Geun Su Lee	30205/37456	4829

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EXAMINER

THORNTON, YVETTE C

ART UNIT	PAPER NUMBER
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1752

8

DATE MAILED: 11/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/884,313

Applicant(s)

LEE ET AL.

Examiner

Yvette C. Thornton

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 4-7 and 14-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 8-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This is written in reference to application number 09/884313 filed on June 19, 2001 and published as US 2002/0061461 on May 23, 2002.

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The Information Disclosure Statement filed on November 26, 2001 has been entered and fully considered.

Election/Restrictions

3. Applicant's election with traverse of group I, claims 1-3 and 8-13 in Paper No. 7 is acknowledged. The traversal is on the ground(s) that groups I-V and that a proper search for group I would inevitably cover the classes and subclasses listed for group II-V. This is not found persuasive because while a complete search of the claimed product would include a determination of whether the claimed photoresist polymer has been previously used or made, it does not limit the examiner to any given method of making or method of using as set forth in the non-elected groups. The examiner reserves the right to rejoin the process claims if the product claims as found to be allowable.
4. Further, US applications are not held to the standard of "unity of invention". Groups I-V each have acquired separate status in the art as shown by their different classification, restriction for examination purposes as indicated in Paper No. 3 is proper.
5. The requirement is still deemed proper and is therefore made FINAL.

Specification

6. The disclosure is objected to because of the following informalities: Figure 1 is not described in the specification in detail. The examiner believes that page 8, lines 14-25 describe the steps of figure 1 however no reference is made to the said figure.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

8. Claims 1-3 and 8-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The examiner is unclear if the monomer units "c"- "f" contain ethylene backbone units or if the applicant is claiming a single carbon repeating unit. For examination purpose, and in light of the specification, the examiner has interpreted the claims to be an ethylene backbone (C=C) (see spec. pg. 11; ex. 2). Clarification is requested.

Double Patenting

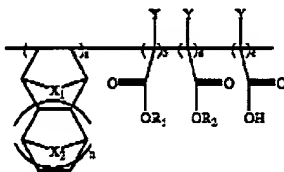
9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

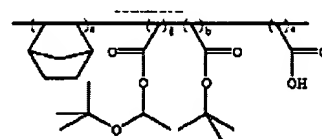
10. Claims 1-3 and 8-13 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-2 and 9-14 of copending Application No. 09/862199 (US 2002/0018960A1). Although the conflicting claims are not identical, they are not patentably distinct from each other because they each pertain to a photoresist polymer and composition containing the same. Lee ('199) claims a



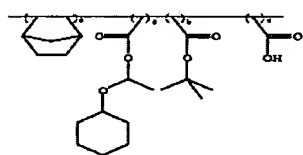
polymer having the formula

wherein n is 0; R1 is a substituted or

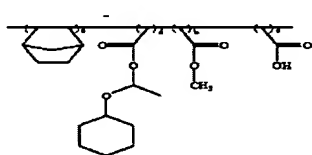
unsubstituted linear or branched C1-10 alkyl; R2 is a $-\text{CH}(\text{CH}_3)\text{OR}_4$. Claim 2 set forth the



preferred embodiments. Specifically the following compounds



, and



meet the limitations of the claimed

formula 1 wherein claimed monomers "a", "c" and "f" are present. R is t-butyl, cyclohexyl respectively are acid labile groups and X is CH_2 . Lee ('199) also claims a photoresist composition comprising the said polymer, a photoacid generator and an organic solvent. It would have been obvious to one of ordinary skill in the art to make a photoresist polymer according to claim 1 of Lee ('199) wherein R2 is selected from the preferred substituents of

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claim 2 and to further use the said polymer in a photoresist composition according to claim 9.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

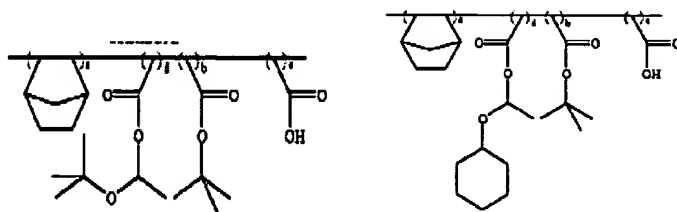
A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. Claims 1-3 and 8-13 are provisionally rejected under 35 U.S.C. 102(e) as being anticipated by copending Application No. 09/862199 which has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the copending application, it would constitute prior art under 35 U.S.C. 102(e), if published under 35 U.S.C. 122(b) or patented. This provisional rejection under 35 U.S.C. 102(e) is based upon a presumption of future publication or patenting of the copending application.

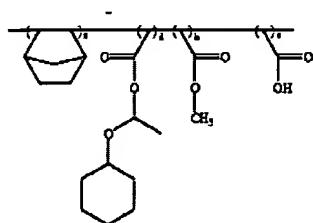
13. Lee ('199) exemplifies in examples 4-6 the synthesis of polymers having the following

structures:



, and

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which meet the limitations of the claimed formula 1 wherein

claimed monomers "a", "c" and "f" are present. R is t-butyl, cyclohexyl respectively are acid labile groups; X is CH₂; and n=0. Examples 7-9 used the said polymer in combination with the solvent propylene glycol methyl ether acetate (PGMEA); and acid generators phthalimidotrifluoromethane sulfonates and triphenylsulfonium triflate to form a photoresist composition.

14. This provisional rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the copending application was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131. This rejection may not be overcome by the filing of a terminal disclaimer. See *In re Bartfeld*, 925 F.2d 1450, 17 USPQ2d 1885 (Fed. Cir. 1991).

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Chang et al. (US 6303725 B1) which teaches a cyclic dione polymer.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yvette C. Thornton whose telephone number is 703-305-0589. The examiner can normally be reached on Monday-Thursday 8-6:30.

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17. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet C. Baxter can be reached on 703-308-2303. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

18. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1193.

19. ****Please note that the examiner has recently changed her name from "Clarke" to "Thornton".****

yct
November 14, 2002


JANET BAXTER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700